

WHAT IS CLAIMED IS:

1. A method for acquiring and transmitting data between two or more positions or locations relative to a detected condition and/or event in a plant, said method
5 comprising the steps:

positioning or locating at least one detector in said plant to detect a condition or event at a plant position or location;

positioning at least one battery-powered radio
10 frequency transmitter in said plant in communication with said at least one detector, said transmitter having a transmittable identification code and capable of transmitting a signal relative to said identification code, the detector, and the battery;

15 providing a central processing location for receiving a signal from said battery-powered transmitter relative to the identification code, a condition or event detected at a position or location in said plant, and the battery; and

20 providing at least one other transmitter in communication with said central processing location, said other transmitter capable of transmitting signals relative to a condition or event detected at a position or location in said plant.

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2. The method of Claim 1, further comprising the step of positioning or locating at least one more detector and/or sensor to detect and/or sense a condition or event at a plant position or location.

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3. The method of Claim 2, further comprising positioning at least one transmitter in communication with said at least one more detector and/or sensor.

4. The method of Claim 3, wherein the one battery-powered radio frequency transmitter is a spread spectrum transmitter.

5 5. The method of Claim 4, wherein the one battery-powered radio frequency transmitter is a 900 megahertz spread spectrum transmitter.

6. The method of Claim 1, wherein the one battery-powered radio frequency transmitter is a 900 megahertz spread spectrum transmitter and transmits on predetermined time intervals.

7. The method of Claim 1, wherein said at least one other transmitter comprises a radio frequency transmitter.

8. The method of Claim 7, wherein said at least one other transmitter comprises a spread spectrum radio frequency transmitter.

9. The method of Claim 8, wherein said at least one other transmitter comprises a 900 megahertz spread spectrum radio frequency transmitter.

25 10. The method of Claim 4, wherein said at least one other transmitter comprises a 900 megahertz spread spectrum radio frequency transmitter.

30 11. The method of Claim 1, wherein the plant is a pharmaceutical plant.

12. The method of Claim 1, wherein the plant is a refinery.

13. The method of Claim 1, wherein the plant is a petrochemical plant.

14. The method of Claim 1, wherein the plant is a
5 food processing plant.

15. The method of Claim 4, wherein the plant is a pharmaceutical plant.

10 16. The method of Claim 4, wherein the plant is a refinery.

17. The method of Claim 4, wherein the plant is a petrochemical plant.

15 18. The method of Claim 4, wherein the plant is a food processing plant.

19. The method of Claim 1, wherein the at least one
20 detector sensor is positioned in communication with a pipe in said plant.

20. The method of Claim 1, wherein the at least one
detector is positioned in communication with a valve in
25 said plant.

21. The method of Claim 1, wherein the at least one
detector is positioned in communication with an enclosure
in said plant.

30 22. The method of Claim 15, wherein the at least one detector detects a temperature.

23. The method of Claim 16, wherein the at least one detector detects a pressure.

24. The method of Claim 1, wherein the at least one
5 detector detects a level.

25. The method of Claim 21, wherein the at least one detector detects a level.

10 26. The method of Claim 23, further comprising at least a second detector in said plant, said second detector in communication with at least one battery-powered radio frequency spread spectrum transmitter, said second detector detecting temperature.

15 27. The method of Claim 21, wherein the at least one detector detects emissions.

28. The method of Claim 21, wherein the at least
20 one detector is an adsorption detector.

29. The method of Claim 1, wherein the at least one detector detects emissions.

25 30. The method of Claim 1, wherein the at least one detector is positioned in communication with a pipe enclosure.

31. The method of Claim 1, wherein the at least one
30 detector is positioned in communication with a valve stuffing box enclosure.